

**INVESTIGATE THE CUSTOMER'S UNDERSTANDING OF
THE BILLBOARD ADVERTISEMENTS**

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ABSTRACT

The topic of this project is INVESTIGATE THE CUSTOMER'S UNDERSTANDING OF THE BILLBOARD ADVERTISEMENTS. The main purpose of this study focuses on the issue of investigating whether understanding of pictorial, text, and overall message and Keller model for Attention, Relevance, Confidence, and Satisfaction (A.R.C.S) differ by gender, race, and age. This study was conducted on a different billboards located in Kedah State, Malaysia. The study also emphasises that both Gestalt theory and visuals on billboard have a dimensional effects in terms of the image, text, and overall messages of the billboards. The findings reported that there were significant differences in understanding of pictorial elements and overall messages by gender with females reporting significantly higher means than males, but there was no significant difference in understanding of textual elements by gender, race, and age. Meanwhile, the result indicated that the mean scores of females towards understanding billboards were significantly higher.

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CHAPTER 1

INTRODUCTION

1.0 Introduction

This chapter explained the background of this work and the research problems that need to be solved in terms of the research questions. The chapter also described in details the definition of terms, Limitation, scope and its significance in order.

Billboards are considered to be one of the most powerful form of advertising that widely used all over the world to deliver fast and quick concept to the audience (Taylor, Franke, & Bang, 2006). The reason why billboards are more essential these days is because they target a certain group that no other advertising form can target. Billboards are usually placed in highways and main stream streets and serve a certain purpose and that is to capture the audience's attention quickly because the target intended is a movable one and can't stop and view the visual design and admire it's details, and that's why billboards come in handy because they serve that purpose by delivering a quick message to the moving target such as vehicles and pedestrian (Barrios, 2003; Clifford, 2008).

This first appearance and use for the billboards were in the 1980's and grew popular ever since because of their intriguing different colors, designs, and messages. Billboards are efficient and interesting advertising tool and they are easily noticed because of the visual elements and the way they are used in the billboards, billboards are also quickly changed and have a short life limit yet make a quick impact and should be simple yet

bold and readable from a far distance, and are usually placed in crowded streets, highways, as well as main stream streets (Pulli, et al., 1997).

1.1 Background

In graphic design, the designers are required to present an illustrated idea which is basically resulted as a poster, billboards, brochure, animated movie or other type of visual arts. These visual arts should be presenting an idea or a message or even some information that is useful for audiences (the viewers of that art) (De Vecchi, 2003). But it is difficult to understand all people's way of thinking. For that reason, there should be a suitable structure or procedure of design to follow that aims to deliver the message of that art or make people understand what they see in the right way. Lots of theories and rules were raised in the past that deals with that matter of understanding the message and visual perceptions in the visual art such as Gestalt psychology (Hartmann, 2006).

The psychology of Gestalt is one of those theories of understanding and organizing perceptual prospects. Gestalt's psychology is different from the more mentality approaches that its tendency to analyze mental processes into elementary sensations (Gurwitsch, 2010b).

Basically, Gestalt's principles are rules of the organization of perceptual scenes (Gurwitsch, 2010a). Those rules assimilate the basis of good design because the theory's main principle is to give the big or whole picture and deliver the message of it better than looking at the elements of which that picture is made of.

For designers, as a visual rule, it is base that the whole in the design gets higher attention than the total of individual elements where from there, Gestalts has its strength in visual perception

(Corsini & Wedding, 2010; Lester & Dassonville, 2011) The billboards force the viewer to do three things:

- 1)Enjoy the visuals: billboards picture must be nice, colorful, and attractive.
- 2)Read the text: billboards text must be short, nice, and catchy.
- 3)Interpret the hidden or over all messages positively.

However, the visual literacy of designing billboards reflects the ability of person's to interpret, negotiate, and make meaning from information presented in the form of an image. Visual literacy is based on the idea that pictures can be "read" and that meaning can be communicated through a process of reading (Fitzek, 2010).

1.2 Problem Statement

In this ever changing world we are living in, it's very hard to capture ones attention. In this life, lots of important universal companies are developed. Lots of vital events are being launched everywhere whether it was political or social-based events. All this needs to reach people (Pelli, et al., 2009). Therefore, advertisements' (ads) is the core way in delivering to people all over the entire world about these events. Billboard is one form of advertisement that is large and being used outdoors to attract people in vehicles and pedestrians. Different levels used to be followed during the designing of billboards which present an appropriate meaning for certain needs such as (Effective meaning,

understandable meaning, and non understandable meaning) (Novick & Catley, 2007). Recently, reading the billboards elements by users facing a lack to interact them for the main meaning of the billboards, that may not understandable for a certain groups of users (Englis & Solomon, 2000).

The main issue of this study can be customized towards the distribution of billboards over the highway without any one indication to clarify whether these billboards are effective or understood, and by whom, which also carries the user assumptions and enjoyment while reading them. This study examined in highway of Malaysia to investigating whether understanding of pictorial, text, and overall message and Keller model for (A.R.C.S) differ by gender, race, and age. Billboard advertisements should reach customer with its different text, visual elements and designs. The movement of the customer while driving a vehicle makes no time, to stop and look at the billboard advertisement, while running from one place to another. There are also external environment stimulus's, which interrupts target audiences' perception. To catch the customer and to be more effective, billboard advertisements' text, visual elements and design criteria's should be formed with perception criteria's view. They should gather and attract customer's interest and attention.

Different researchers discussed the effectiveness of the age, in motivating persons to read and review the message contents. Reading the digital messages that contains a visual images require a certain conditions to be understood by other persons (Hoffman, Kelley, & Chung, 2003). The gender and person knowledge also addressed as an effective factor for motivating persons to display the billboards elements which can be

authentic-reliable, biased, or even false, using elaborate textual or multimedia manipulations to hide its meaning.

1.3 Research Objectives

The objectives of this study are as follows:

- 1) To investigate whether understanding of pictorial, text and overall message differ by gender, race, and age.
- 2) To investigate whether understanding of attention, relevance, loud, and satisfaction differ by gender, race, and age.

1.4 Research Questions

This work seeks to investigate the following questions that were formulated with the intention of enabling readers to improve their understanding of the interpretation towards the messages in billboards. Therefore, this study seeks to investigate the following research questions:

- 1) Does understanding of pictorial, textual, and overall message differ by gender, race, and age?
- 2) Do attention, relevance, loud, and satisfaction in reading billboards differ by gender, age, and race?

1.5 Research Scope

This study focuses on the issue of investigating whether understanding of pictorial, text, and overall message and Keller model for (A.R.C.S) differ by gender, race, and age. This study was conducted on a different billboards locate in Kedah State, Malaysia. The study also emphasises that both Gestalt theory and visuals on billboard have a dimensional effects in terms of the image, text, and overall messages of the billboards.

1.6 Research Significance

This study investigates the audiences' level of concerns towards visual elements, text, and overall messages of billboard. However, this study shows the levels of understanding and motivation to read billboards differ by gender, race, and age. The finding of this study will help to decide whether the billboards should be targeted by gender, race, and age.

1.7 Research Limitation

The billboards chosen consisted of those designed with clear Gestalt principles and contained visual elements and words that were neutral and not biased towards any gender, race, and age. As such the findings of this study apply only to billboards of similar characteristics.

1.8 Definition of Terms

Billboards: is an outdoor sign or poster you usually see on freeways, highways and streets. A billboard is also an announcement of a sponsor or sponsors at the beginning, middle or end of a radio or television broadcast (Wallace, 2003).

Gestalt principles: is a psychology term which means "unified whole". It refers to theories of visual perception developed by German psychologists in the 1920s (King & Wertheimer, 2005).

Pictorial elements: is a picture elements of mark, line, shape, color, value, texture and space can all be used as unifying factors in a two-dimensional image (Mulken, le Pair, & Forceville, 2010).

Textual elements: is an interactive text representation which displays great potential graphical meaning (Sokolova, Shah, & Szpakowicz, 2006).

Overall message: involving the main idea of the user with a short and long review.

Interpretation: is a mental representation of the meaning or significance of something.

Motivation: is an important element of self understand, it is helpful to know your reasons for those life paths which you choose to follow (Castro, Martin Armario, & Martin Ruiz, 2007).

Attention: is the reflecting of human behavior on one aspect of the environment while ignoring other things (Mondor & Bryden, 1992).

Relevance: is a way for describing and identifying how pertinent, connected, or applicable something is to a given matter (Lindsay & Gorayska, 2002).

Confidence: is a self confidence with a certain situations that human need to achieve or a certain actions that mostly effect.

Satisfaction: is a measurement of user or person needs and other services supplied by different environments to achieve a certain goals (Legris, Ingham, & Colletette, 2003).

1.9 Organization of the Thesis

This research consists of five chapters which begin with the introduction section as the first chapter. This chapter explains in detail about the background of the research and the study problems that need to be solved. The objective, scope and chapter summary have been identified and described constantly. An overview of the content of the following chapters is as follows:

- 1) Chapter two: This chapter discusses about literature reviews, previous related work, and more information to understanding the study.
- 2) Chapter three: This chapter discusses the methodology that used in this work.
- 3) Chapter four: The aim of this chapter is to evaluate the result from the previous chapter, which contained the discussion of the study result.
- 4) Chapter five: This chapter discusses conclusion of this study.

1.10 Chapter Summary

Billboards are almost integrated in all aspects of our lives. This will move the era to a modern future full of knowledge and technology. In order to ensure that billboard messages are successful, students' needs and concerns should be given top priority in any change process. In advertisement, basically, it should attract the audience then it turns the attention to the desire and action. From this point of view drawing attention is

the most important factor for the success of an advertisement. There are basic concepts of billboard such as its text, visual elements colors, enable to reach large audiences effectively. In designing billboard advertisements, designing attention and perception criteria's are very important. As such billboard advertisements should provide a clear and easy to understand the message. In addition it should be easy to read, legible, and should have the harmony and animation. The basic concepts; sexuality, fear, color of the billboard (text, figures), legibility, readability, contrast, balance, excitement, use of white spaces, humour and texture, harmony and focal point used in billboards, enable this medium to reach large audiences effectively.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This chapter gives a review of the literature to investigate the effectiveness of Gestalt theory in enhancing the billboards design structure for the marketing purposes. As well, the related and the previous study have been provided in this chapter to highlight the study objectives.

The concentrate when conducting business by any providers or suppliers is to promote the products in the way that interact customers, which depends on different categories such as age, gender, education, etc. This reveals the fact that business providers for remaining in business, they need to generate enough sales from its products to cover operating costs and post reasonable profits. Therefore, providers and mark leaders in different organizations keeps tracking the customer assumptions and attitude towards the way of presenting products. The sales estimate is the starting point in budgeting or profit planning, which need to be reported in all the marketing stages, even before production units could be arrived at while production units will in turn affect material purchases. Bearing in mind, the significance of the marketing advertisement on the business survival and the association between customers and sales, it is convenient for organizations to keep in programmes that can effects on the consumers' decision to purchase its products which can be depends mostly on the way of presenting these products. This is where advertising and brand management are relevant. Advertising is a subset of promotion mix which is one of the 4ps in the marketing mix, such as

product, price, place and promotion. As a promotional strategy, advertising serve as a major tool in creating product awareness and condition the mind of a potential consumer to take eventual purchase decision.

Nevertheless, the combination of advertising, sales support and public associations are consider to be a part of the mass communication tools accessible to marketers. As its name suggests, mass communication uses the same message for everyone in an audience. These tools substitution the advantage of private selling, the opportunity to tailor a message to each viewpoint, for the advantage of reaching many people at a lower cost per person. Hence, there have been a clear concern regards designing the marketing advertisements billboards which known as communication process, a marketing process, an economic and social process, a public relations process or an information and persuasion process (Arens, 1996). Dunn et al. (1978) viewed advertising from its functional perspectives, hence they define it as a paid, non personal communication through various media by business firms, non-profit organization, and individuals who are in some way identified in the advertising message and who hope to inform or persuade members of a particular audience.

Different studies find motivations based marketing advertisement to be a new things and at the same time difficult and tedious issue. Some studied referred to the importance of visual ability to absorb information within certain needs (Shanahan, 2003). In the field of education; research and communication are exceptionally fundamental essentials which studies cannot be performed without relevant independent elements (Raguso, 2004). Ads present a motivational and effective way to present and overview supplier's needs based on certain advertising tools and methods

(Beverland, Lindgreen, & Vink, 2008). Without these tools the quest for seeking success can be a terrifying experience. So what is the solution to make Ads a pleasant and enjoyable? How can people interact and understand the integrated elements? The answer to this is the instructional development tools and methods (Aguliar, 2005).

Marketing advertisement development tools and methods are considered as a covering term that encompasses all technologies for the use and enhance of Information presentation (Gretzel, Yuan, & Fesenmaier, 2000). This determination of these tools helps to design and develop the require billboards based on familiar concepts. Marketing advertisement development tools and methods involves all the aspects of the use of computer hardware for designing and developing the main visual marketing advertisement elements, disks, monitors, microphones, speakers (De Mooij, 2009). With all these tools the users who are interesting to conquer the field of Ads which has unlimited sources that inspires and motivates those users to learn without fear or hesitation (Doole & Lowe, 2008).

The literature review is a sampling of the studies that discuss the available researches about the understanding of pictorial, text, and overall message, and A.R.C.S which differ by gender, race, and age. It also embarks on the people attitudes and perceptions towards Ads.

2.1 Motivational Billboards

The motivating impact of billboards can be shown in many ways:

2.1.1 Enthusiasm

The majority visible demonstrations of motivational benefits were in the billboards that also were characterized by passion and thrill. Generally, there is different amount of aspects that improved the practice beyond this basic level. The billboards and other Ads elements on the roads have an animation that inspired the people to understand and interact with the integrated elements into these billboards (Floyd, Gibson, Pennington-Gray, & Thapa, 2003).

2.1.2 Understanding

Understanding picture elements consider an effective way to generate and evaluate the people interaction for watching and understanding the billboard elements in more flexible and easy ways. Most of these ways follows with people behavior for understanding other concepts (Terry-Mcelrath, et al., 2005).

2.1.3 Interest

Billboards can have a huge impact on the curiosity level of people to understand the integrated elements that other need to show. At its basic level the Internet is used as a source of information both for designer and people. The variety of material that can be found is increased, obviously, by billboards companies. This field of the research also report on the keenness and the continual connection of the people understanding and interesting throughout the billboards. The use here of a number of resources will be needed expert billboards designers. Many studies concluded that the range of activity and momentum of people interact from one activity to the next could not have been reached without the resources given by the instructional development elements (Kerr, Proud, & Beede, 2007).

2.1.4 Asynchronous interactive

People take part with an instructor and other methods, even though not at the same time.

2.2 Types of Billboard

Billboards have significantly changed over the years and there types and design always keeps improving and changing as time goes by. Nowadays there are four types of billboards that are currently being used such as:

2.2.1 Traditional Billboards

Are large bulletin billboards that are typically 14'x48' (high x width) and the smaller ones are 22'x10' and 20' 6'' x 9' or 12'x24' known as posters. Poster displays consists of a series of printed paper sheet that are pasted on, and there size differs from one place to another and there display is painted or printed on a vinyl sheet or vinyl banners (Lobb, Harre, & Terry, 2003).

2.2.2 Mechanical Billboards

Is a modern based billboards that uses a technique called tri-faced which is usually known as rotating or multi message billboards these kind of billboards view 3 separate advertisements in rotation using a mechanical system, the displays of these billboards are printed on strips of vinyl these billboards are thought to get more attention as the motion attracts attention. Another type of the mechanical billboards is the scrolling billboard which is capable of viewing up to 30 images per side using a roll up (Castro, et al., 2007).

2.2.3 Digital Billboards

This is a new kind of billboard that is entirely digitalized by using projection and similar techniques enabling animation and completely rotating advertisement.

2.2.4 Mobil Billboards

This is a mobile kind billboard which is used on trailers, flatbed trucks or covering an entire vehicle or sometimes used on other mobile transportation such as buses and cargo containers by either on there on or stacked on top of each other which are commonly placed on fields next to busy roads and are commonly lower priced than the other kinds of billboards (Aufrecht, Weinstein, & Broadwell, 2005). At anytime we look at something, whether it was a poster or billboard or other thing, from the photos and texts that make up a layout, we start judging the thing we are looking at from the design prospective, especially when two persons (or more) are looking at the same thing but each one understand it differently.

2.3 Marketing Ads based Gestalt Theory

2.3.1 Overview

The definition of this theory back to the existential optimization of psychotherapy rules that emphasizes personal needs to catch and understand ideas. This theory models the design elements that focus upon the individual's experience. However, Gestalt theory helps to identify the therapist-client relationship, the environmental and social contexts of a person's life, and other person attributes as a result of their overall situation (Desolneux, Moisan, & Morel, 2008).

According to Edwin Nevis, which described this theory as "a conceptual and methodological base from which helping professionals can craft their practice" (Magro, 2008). In another hand, Joel Latner also described and adjusted that Gestalt theory is built upon two central ideas: "that the most helpful focus of psychotherapy is the experiential present moment, and that everyone is caught in webs of relationships" (Magro, 2008). The background of this theory justify the needs to overcome the person needs to be motivated and more understanding. Gestalt theory concern on process of the integrated elements into objects more than content (what is being talked about). The emphasis of this theory is the determination of common objects that needs to be utilized, thought and felt at the present moment. Gestalt theory is a method of awareness practice, by which perceiving, feeling, and acting are understood to be separate from interpreting, explaining and judging (Gaynier, 2005).

Gestalt theory aims to simplify and determine the client needs from the final view to become more fully and creatively alive, and to suspend free from the blocks and unfinished business that may diminish satisfaction, fulfillment and growth. Figure 2.1 shows the Gestalt theory based objects.

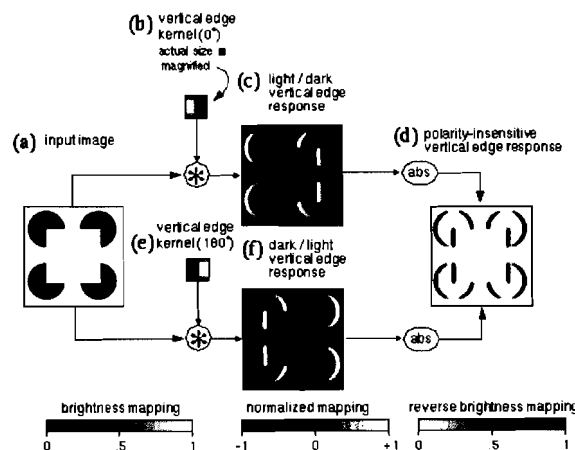


Figure 2.1: Gestalt theory based objects

2.3.2 Roles of Gestalt Theory

Therefore, Gestalt theory plays its role by answering the raised following questions:

- 1) When does it look better together than apart (photos and texts)?
- 2) Does the piece have greater meaning as a whole than as the individual parts?
- 3) What is the message or story it is telling the world?

There are several rules of Gestalt's theory that is applicable in any given project or piece. Several of these principles may be applied, and typically tend to complement each other. These rules or principles are:

A- The Rule of Proximity

This rule shows how elements of the pieces (posters, billboards, brochures) are clustered based on their nearness or closeness. These individual elements in that piece may be different or the same. In Figure 2.2, three pictures present clustered elements. The middle picture has an odd or anomaly result where it shows the letter A is far a bit from the other B, C.

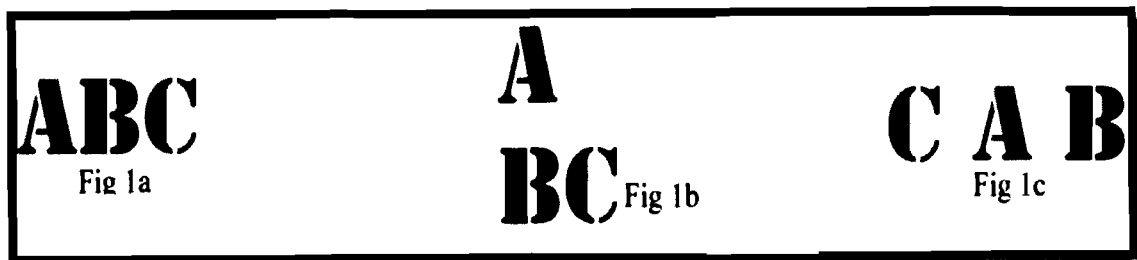


Figure 2.2: Example of the rule of proximity



Figure 2.3: A real-world example of the law of proximity

B- The Rule of Similarity

This rule applies to items that are similar in some respect. Though it is not always the case, these items do tend to be grouped together as well. The above example holds true for this rule. The similarity is in the fact, I used all letters. These groupings are also based on the use of the same colors in all three groups. They are also similar in the fact that there are three groups of three items of the same three colors. It could also have used three pictures of domestic animals such as cats, dogs, and guinea pigs.

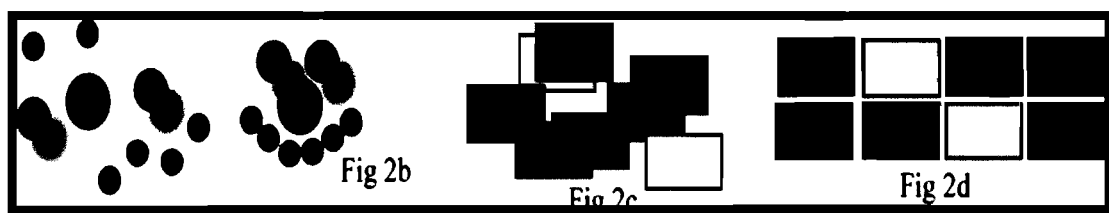


Figure 2.4: Example of rule of similarity

C- The Rule of Closure

Items grouped together to complete an entity. This one is a little more complex, but not difficult. It is used a lot with logos. Many companies use two or three letters combined

to create a memorable design. It is sometimes coupled with the Rule of Figure/Ground for effect.

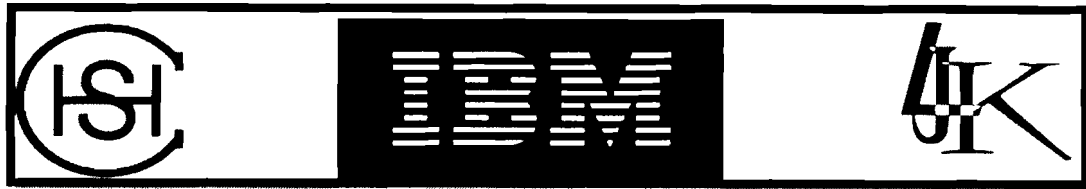


Figure 2.5: Example of rule of closure

D- The Rule of Simplicity

This is the use of organizing things into simple designs by way of their symmetry, regularity, and texture. This has been adapted to also be known as the KISS method. For the politically correct, it is called Keep It Simple Student! The more simple and straightforward your message is, the quicker the message will get across. A typical application is “the golden arches”. Almost every nation in the world is familiar with the McDonald’s logo. The same holds true of Xerox and Nike, as well as Apple. Sir Isaac Newton would have been proud! Look what one little apple in a box can do.



Figure 2.6: Example of rule of simplicity

E- The Rule of Repetition

Remember when we were kids (For some of us, that’s hard), and you got in trouble with the teacher and she made you write sentences? And you had to write the same

sentence over and over until your hand wanted to fall off? It's the same thing, only less pain, and more fun.



Figure 2.7: Example of rule of repetition

F- The Rule of Figure/Ground

This rule lets the mind fill in the blanks more or less. Have you ever looked at the bottom of the page where the letters got cut off but you still knew what it was telling you? It can also be the concept of looking at a picture that has two optical illusions. The picture of the young/old woman is a really good example of this. Some people see the young woman with her plumed hat, while others see the old crone. All of us can see both after someone points them out.

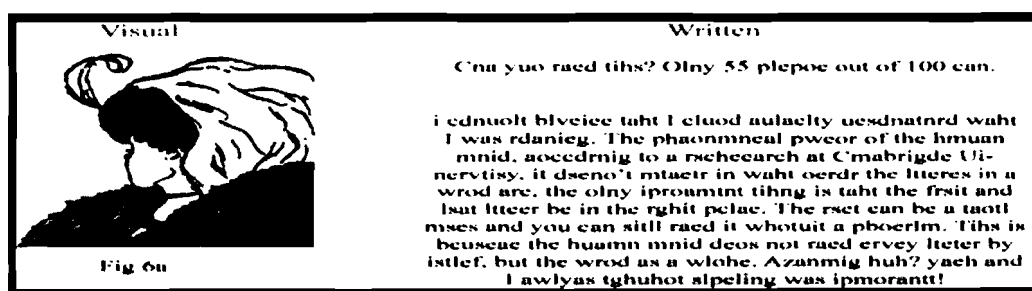


Figure 2.8: Example of rule of figure/ground

2.4 ARCS Theory

According to John Keller, there are four major categories of motivational strategies use for different educational and motivational needs: Attention, Relevance, Confidence, and Satisfaction (Grayson & Shulman, 2000).

2.5 Related Works

According to Ricardo and Joaquim (2009) introduced a new interaction techniques for displaying and presenting billboard interfaces along with the distance and size in natural interaction to larger surfaces. Ricardo and Joaquim argued about the effectiveness of that large screen displays as in interactive and motivate way to display the interaction boards interface elements, the stud apply a comparative study of interaction metaphors for large scale displays. The concern of the authors was measuring the interactivity of present three metaphors: Grab Point and Mouse. However, there are some hints that the other two still remain valid, even if on very specific tasks (Ricardo, J., and Joaquim, A., 2009).

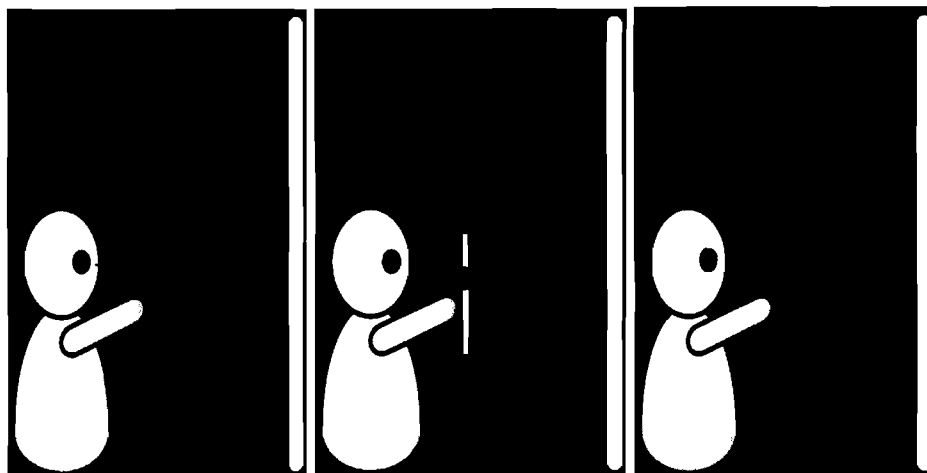


Figure 2.9: User interaction

The effectiveness of using an interactive ways for displaying the billboards element has increased recently. A study by Hairong, L., et al. (2002) examined the user satisfaction of the intrusiveness of advertisements. The study used a scale to record the consumers understanding that construct and developed to fit the study needs.

Traditional scale techniques have applied too for the development stage; the study uses expert-generated adjective lists, expands possible measures using a thesaurus, and finally reduces the number of items statistically to derive a new measure of advertising intrusiveness. The sample of this study was conducting in many experimental conditions and is found to be valid, reliable, and parsimonious. Finally, the importance and other consumer's advantages of displaying advertising elements are discussed in this study by employing two models shown in Figure 2.10 and 2.11 (Hairong, L., et al., 2002).

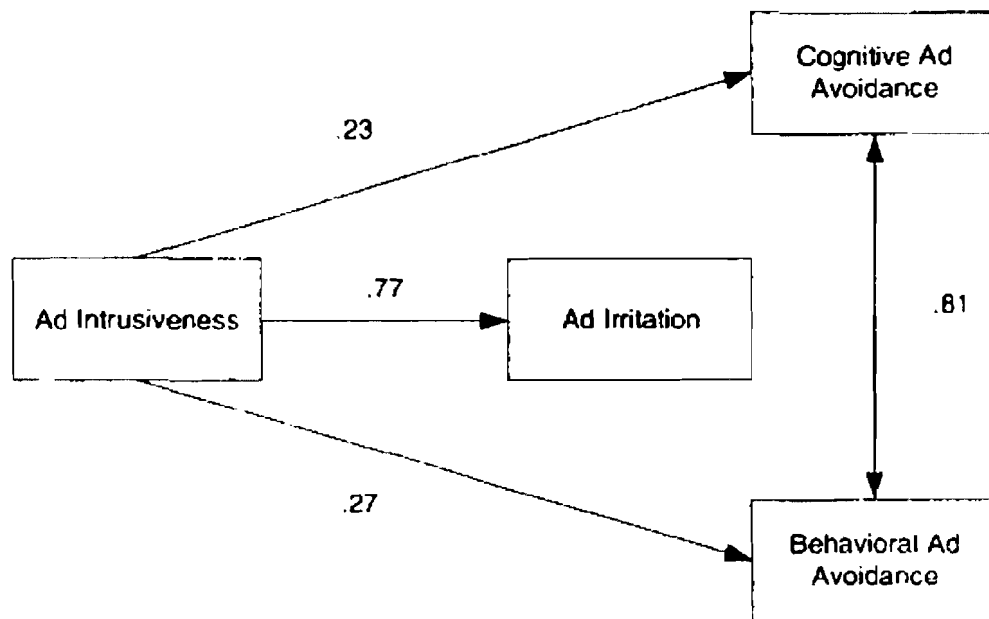


Figure 2.10: Ad Intrusiveness model A (Hairong, L., et al., 2002).

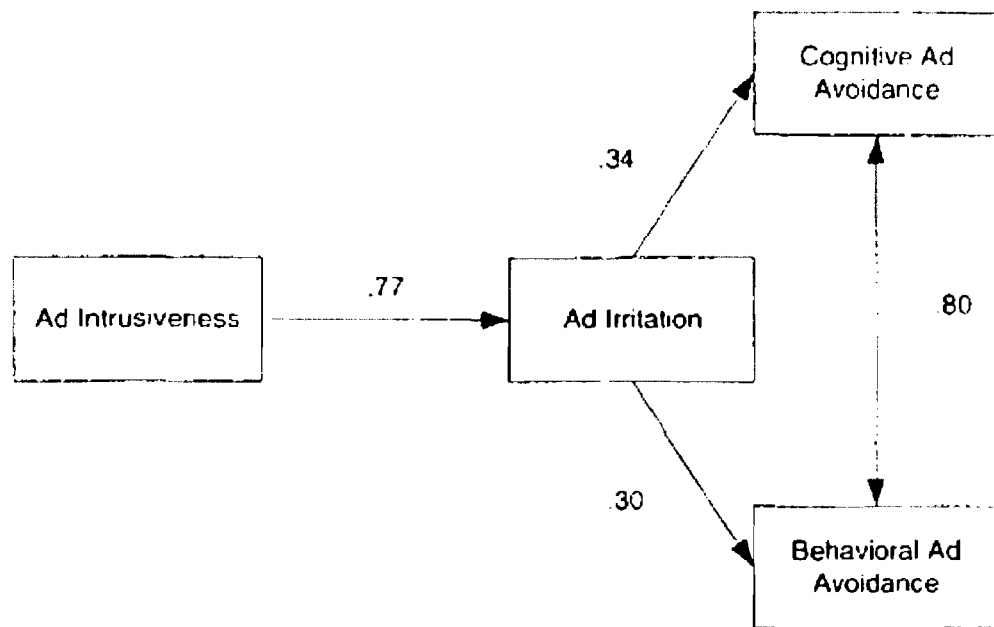


Figure 2.11: Ad Intrusiveness model B

Scholar by (Castro, et al., 2007) highlighted the importance of the marketing billboards on the consumer perceptions that have become the main target for the companies due to the benefits of maintaining a solid base of loyal customers. He evaluated the effectiveness of the pictorial elements of the marketing advertisement on the consumer attentions based on the developed innovative model that mainly focus on the loyalty intentions of tourists. After that, he determined whether market heterogeneity affects this relationship by performing a latent cluster analysis. The analysis result indicate that there are significant differences among these segments in terms of the effects of a destination's image on tourists' intentions to return to a destination and their intentions to recommend it to friends and relatives (Castro, et al., 2007).

Another scholar was done on the investigation of the billboard advertising on the marketing performance and its relation with customer based on a survey was

conducted. The survey revealed that four main challenges that why businesses often use billboard advertising: visibility, media efficiency, local presence, and tangible response. The scholar also addressed eight relevant factors that are connected with successful billboard advertising differs by the name identification, location of the billboard, readability, clarity of the message, use as a tool of integrated marketing communications (IMC), powerful visuals, clever creative, and information provision. The findings revealed that existing textbook and trade-press discussions to document the factors are playing an important factor for making billboards an essential promotional tool (Taylor, et al., 2006).

A study by Kathryn A. (2008) illustrated the occurrence of stereotypical representations of gender and other characteristics in individuals that appear in advertisements. In this study, advertisements larger than one third of a page that contained a human figure (N=1809) were analyzed in terms of perceived race, gender, occupation, and social characteristics.

Morten, H. (2005) documented that men are more confident for reading than females which differ by their age. This study found that men do not mind reading, when they have an interesting book, and nobody makes it a sensation, landmark or result of some simple project. A project in the rural small town Brekstad, has confirmed the general finding that boys read less than girls. Nevertheless, the project report underlines that boys don't want their reading to be organized, or a part in a program.

Denise (2006) perceived the racial equality in American advertising differed by age and race, the study found that the understanding of posters elements for Americans is

differ by age and race. A survey was conducted to find out the African-American and the Hispanic perceptions about how these ethnic groups saw themselves depicted, and the way they are stereotyped by the U.S. media. In addition, the study also exposed that African-Americans are mostly portrayed in the athletic advertising industry. Hispanics, on the other hand, appear most often in family oriented and business oriented ads.

2.6 Summary

This chapter has defined the Billboards as an effective way to present and generate person's satisfaction. Also it provides the persons with the appropriate display that could be used for different advertising needs. This chapter addressed and introduced the billboard, type of billboards, and justifies the billboards type elements. This chapter also introduced and discussed two theories John Keller theory and Gestalt theory. Related works also were discussed in this chapter for highlighting the adapted approaches in different research stages.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explained the methods and techniques used in this research. The chapter also described in details the theoretical framework, hypothesis. It included research design, population, research instruments, data collection procedure, and data analysis procedure. This chapter is a systematic process, which has guided the researcher to develop a strong foundation in data analysis in the next chapter.

The main component of this chapter is the research design is the plan and structure of investigation conceived so as to obtain answers to research questions. The plan is overall scheme or program of the research (Emory & Cooper, 1991). According to Gummesson (1991), the research process should be dynamic in terms of:

1. During the project, the researcher learns continuously by communicating impressions, hypotheses, and so forth to those involved and to other researchers.
2. Research should be creative.
3. The researcher should check impressions etc. with others and thereby gradually expressing the paradigm and its consequences with a greater degree of precision.

The design process of research elements determines how best to construct a project that delivers these requirements. Design is first concerned with the specification of the research architecture that defines the major strategic components and their

relationship, design involves reaching a balance between requirements. That conflict with each other within implementation environmental constraints.

The first step in the design phase is to develop the design strategy. The interface design specifies how the user moves through the performance of the study.

According to Emory and Cooper (1991) point out that survey is typically perceived as being more impersonal, providing more anonymity than the other communication modes. Sekaran (2000) believes that the main advantage of questionnaires is that wide geographical area can be covered in the survey.

3.2 Theoretical Framework

The aim of using Gestalt theory in different billboards designs followed the basic principle that the whole is greater than the sum of its parts. The billboards contain a different elements needs to be integrated in the board which carried a different meaning, more than the individual components to fit the customer perceptions. Gestalt theory, concern on introducing the marketing ideas in different ways that helps to make an ordering for the contents, to create harmony or structure from seemingly disconnected bits of information. Designing billboards elements require a lot of money to know their target audience that other particular group needs to display (Sharma, L., 2006). The main elements of designing any billboards can classify to:

- 1) Visual Images: the most effective way to motivate user to display the billboards is the using of visual images which people often “read” with their eyes,

advertisers try to impress people with eye-catching pictures, e.g., a picture of trees creates an impression of nature or peace.

- 2) Slogan: a business or company usually tries to include a short, catchy phrase that it hopes people will remember.
- 3) Logo: this is also a kind of visual image but it is specifically designed to represent a product or company, e.g., the Nike “swoosh” or the McDonald’s golden M arches.
- 4) Text: not only do advertisers choose their words carefully, but they also choose the size and font, and the placement of the words on the pages. Some ads contain only a few words while others have entire paragraphs.
- 5) Colour: the colours in billboards reflect the emotion. Advertisers choose which colours to use and how many different colours to use, in order to create a certain mood or effect on the viewer.
- 6) Space: space plays an important element in success of any billboards. Some companies design the billboards to fit and occupy the require display.

Commonly, Gestalt is a theory of mind and brain positing that the operational principle of the brain is holistic, parallel, and analog, with self-organizing tendencies which still a thriving part of art and visual communication education. Part of the usefulness of gestalt visual laws in design and visual communication education is that they are easy to grasp and implement.

Figure 3.1 presents the current research framework towards the effectiveness of applying the laws of Gestalt theory into the marketing Billboards that been particularly useful to the designers to create meaningful and organized two-dimensional designs

such as logos, posters, magazines, book jackets, and billboards. This theory offers visual communicators a framework of analytical understanding upon which to base meaningful design decisions. This study has employed Gestalt principles for investigating whether understanding of pictorial, text, and overall message, and A.R.C.S differ by gender, race, and age.

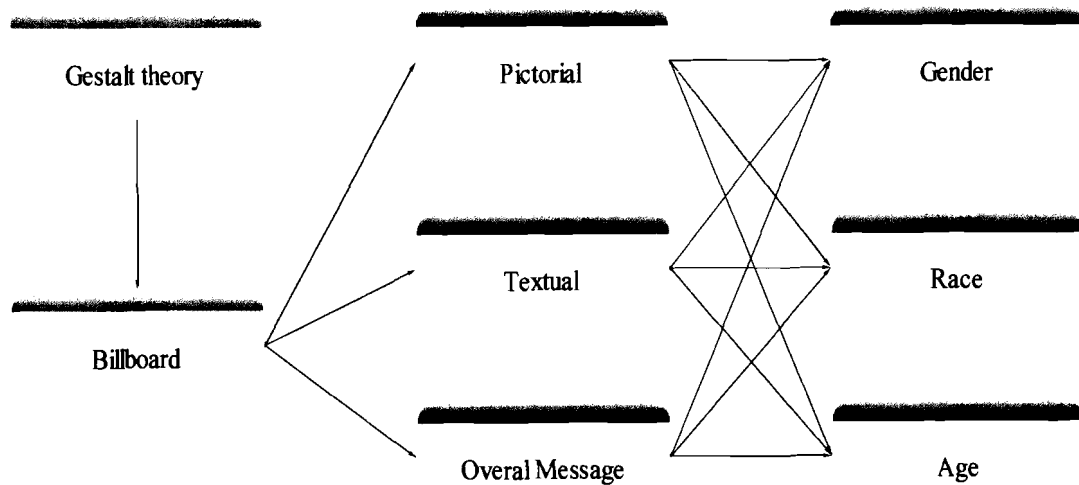


Figure 3.1: Theoretical Framework

However, Figure 3.2 shows the adapted model by Keller for indicating the A.R.C.S level from the consumers.

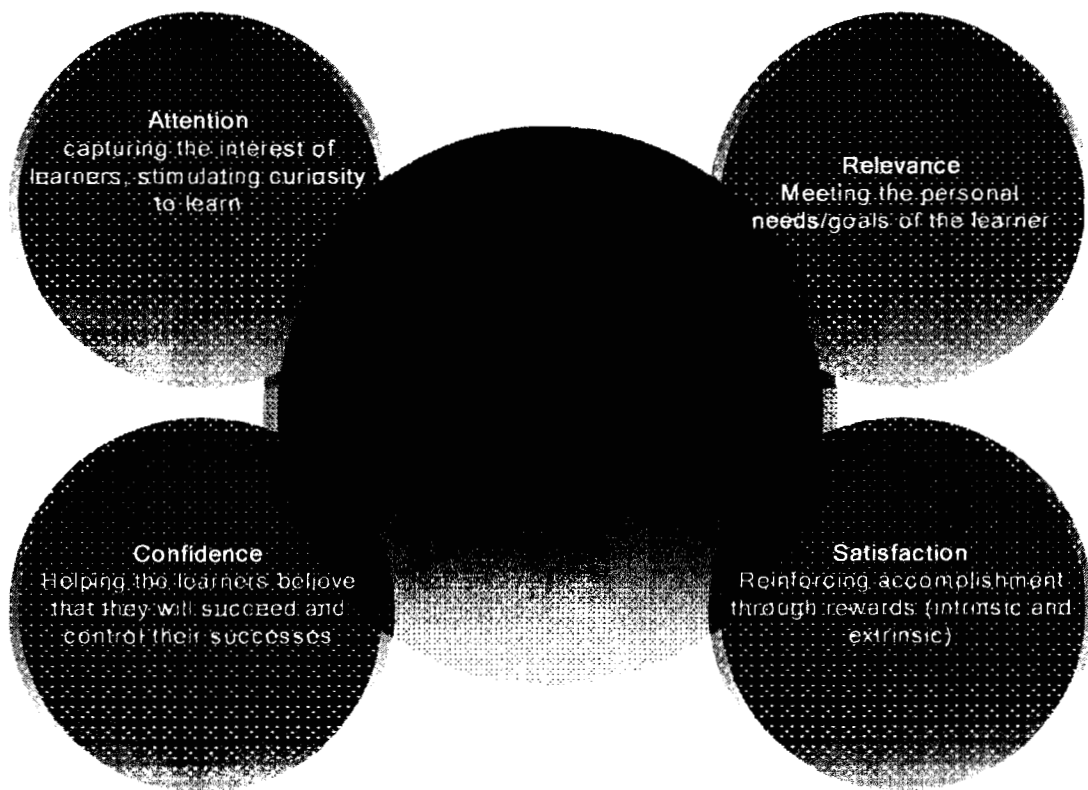


Figure 3.2: Adapted Model (Keller, 2001)

3.3 Research Hypothesis

H□1: There are no significant differences in understanding pictorial elements, text elements, and overall messages by gender.

H□2: There are no significant differences in understanding pictorial elements, text elements, and overall messages by race.

H□3: There are no significant differences in understanding pictorial elements, text elements, and overall messages by age.

H□4: *There are no significant differences in motivating Attention by gender.*

H□5: *There are no significant differences in motivating Attention by race.*

H□6: *There are no significant differences in motivating Attention by age.*

3.4 Research Method and Design

In a survey, data can be collected via several approaches such personally administered questionnaires, mail questionnaire and electronic questionnaire (Sekaran, 2000). Bryman (1992) stresses that the data from the survey allow the researcher to establish whether there are associations among the various variables that are reflected in the questionnaire.

According to John, K., (1996) a questionnaire is a reformulated, written set of questions to which the respondent records his answers, usually within rather closely defined alternatives. A questionnaire is obviously a good way to collect data when the researchers know precisely what information is needed, and the questionnaire survey method offers advantages and efficiency in data gathering.

Emory and Cooper (1991) pointed out that survey is typically perceived as being more impersonal, providing more anonymity than the other communication modes. Sekaran (2000) believes that the main advantage of mail questionnaires is that wide geographical area can be covered in the survey. They are mailed or distributed to the

respondents, who can complete it at their own convenience. However, the major weakness of the mail survey is the lack of response.

The main advantage of this method is that the researcher or a member of the research team can collect the completed responses within a short period of time. Any doubts that the respondents might have regarding any question could be clarified on spot.

This study applied the ARCS model based on a synthesis of motivational concepts and characteristics into the four categories of; attention, relevance, confidence, and satisfaction. These four categories represent sets of conditions that are necessary for a person to be fully motivated, and each of these four categories has component parts that represent specific aspects of motivation.

In another hand Gestalt therapy has been adopted in this study which built upon two central ideas: that the most helpful focus of psychotherapy is the experiential present moment, and that everyone is caught in webs of relationships; thus, it is only possible to know ourselves against the background of our relationship to the other. The historical development of Gestalt therapy (described below) disclosed the influences that generated these two ideas. Expanded, they support the four chief theoretical constructs (explained in the theory and practice section) that comprise Gestalt theory, and that guide the practice and application of Gestalt therapy.

3.5 Population and samples

The populations of this study are from UUM postgraduate students. The sample comprises is employees at the postgraduate students of COB located within the main

campus of UUM. Also the study sample listed related to the motivation issues of billboards. A total of 18 questionnaires have been distributed.

3.6 Variables

3.6.1 Independent and Dependent Variables

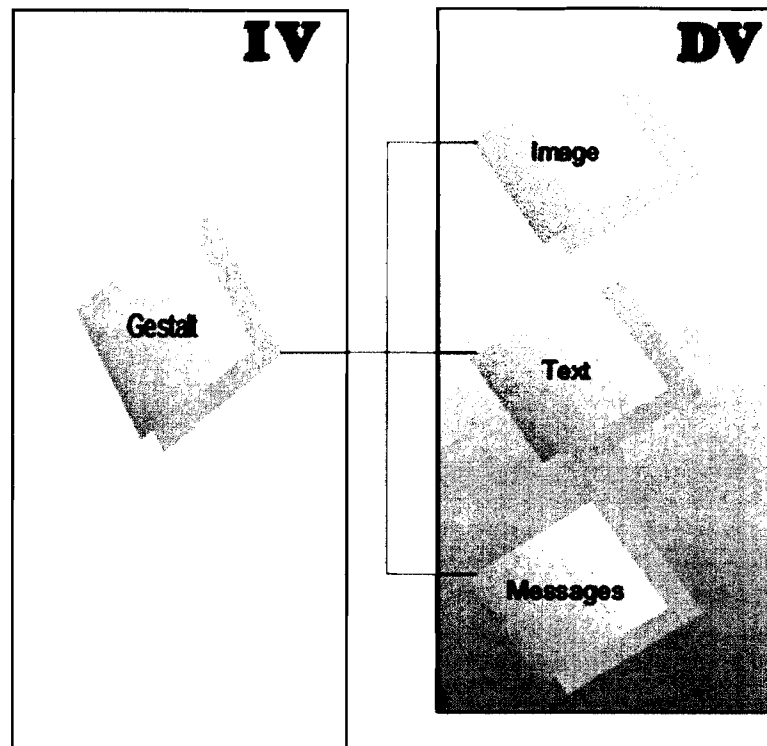


Figure 3.3: Dependent and Independent Variable

Independent Variable	Dependent Variable
1. Gestalt	1. Image
2. Visuals on Billboard Knowledge	2. Text
	3. Overall Messages

Table 3.1: Independent and Dependent Variables

3.7 Instruments

The instrument of this study was conducted on billboard comprehension test and the adapted Keller's IMMS.

Table 3.2 Measurement of Variables

Picture	Gestalt Theory (Nevis, E., 2000)
Text	
Message	
Attention	Keller Theory (John, K., 1996)
Relevance	
Satisfaction	
Confidence	

Keller questionnaire has been collected from the previous and related works on the same fields of understanding of pictorial, text, and overall message, and A.R.C.S which differ by gender, race, and age and other fields in order.

3.8 Pilot Tests

Keller questionnaires have been used by COB respondents; otherwise, the study has been measured in pilot study to test the accuracy of research's instrument. After collecting all questionnaires from 18 respondents, SPSS 12.0 was used to analyze the data.

A pilot, or feasibility study, is a small experiment designed to test logistics and gather information prior to a larger study, in order to improve the latter's quality and efficiency the information has been gathered from COB postgraduate students. A pilot study can reveal deficiencies in the design of a proposed experiment or procedure and these can then be addressed before time and resources are expended on large scale studies.

3.9 Validity and Reliability

Nunally (1978) believed that only when the value of Cronbach Alpha is higher than 0.7 can the research results be accepted. Moreover, Wortzel (1979) suggested that when the value of Cronbach Alpha falls in the range from 0.7 to 0.98, the research results is considered highly reliable. While if the value is lower than 0.35, this research result must be rejected. So given the exploratory nature of the research, 0.5 was chosen as the cut point for the reliability test.

3.10 Procedures of Study

This study classified the billboards elements based on Gestalt principles such as; visual images, slogan, logo, text, colour, and space. The applied principles of Gestalt theory used in this study to investigate the understanding issues. This study focused on the pictorial, text, and overall message. The pictorial concerns on the image line, shape, color, value, texture and space. Furthermore, textual elements concerns on displaying great potential graphical meaning. Finally, the overall message involves the main idea

of the short and long review of billboards. Finally, A.R.C.S differs by gender, race, and age.

3.11 Data Collection

Normal collection method was employed to collect respondents' perspectives on understanding of pictorial, text, and overall message, and A.R.C.S which differ by gender, race, and age. Due to constrain of two months of services observation using Keller questionnaire were conducted.

3.12 Data Analysis

SPSS program used to statistical analysed the data which determined the data from COB postgraduate respondents. The requirements gathering process takes as its input the goals identified in the high-level requirements section of the project plan. Each goal refined into a set of one or more requirements.

These requirements define the major functions of the intended strategic planning, define operational data areas and reference data areas, and define the initial data entities. Major functions include critical processes to be managed, as well as mission critical inputs, outputs and reports. For this study the requirements gathering has been done through distributing Keller questionnaire. Moreover, most of these techniques follow the student's behavior and ability to learn during the evaluation. Refer to (Appendix-A) for Keller questionnaire.

3.13 Billboard Samples

There are many types of billboard and you have chose these billboards based on Proximity, Similarity, Closure, Simplicity, Repetition and Figure/Ground. So, based on this rules I was choose these billboards. Moreover, the motivating impact of billboards can be shown in many ways for example Enthusiasm, Understanding, Interest, Asynchronous interactive.

3.14 Summary

The Keller Theory (John, K., 1996) asserts that attention, relevance, confidence, and satisfaction are the best predictor of behavior and attitude and subjective norm held by individual. The behavior is made as a rational decision by the individual under the volitional condition and the situation that an individual is in makes a difference in whether understanding of pictorial, text, and overall message, and A.R.C.S which differ by gender, race, and age. The next chapter presents analysis and findings of Keller questionnaire elements.

CHAPTER 4

FINDINGS

4.1 Introduction

The objectives of this study were to investigate whether the understanding of pictorial, textual, overall message from billboards differed by gender, race, and age and whether 'Attention, Relevance, Confidence and Satisfaction' (A.R.C.S) also differed by these factors. Thirty respondents from three racial groups were employed in the study. The data was analyzed using SPSS Version 12.

4.2 Testing of the Hypotheses

H₀₁: There are no significant differences in understanding of a) pictorial elements, b) text elements, and c) overall messages by gender.

Table 4.1 reported means, standard deviation (s.d.) and results of ANOVA for understanding of pictorial elements, text elements, and overall messages by gender. For understanding of pictorial elements the females report a mean, $M = 29.81$ with a standard deviation, s.d. 4.47 while the males report $M = 25.21$ with a s.d. = 3.46. The ANOVA test gave $F(1, 28) = 9.677$ at $P = .004$. As $p < .05$, H_01a is rejected. The findings report that there was a significant difference in understanding of pictorial elements by gender with females reporting significantly higher understanding than males.

For understanding of textual elements the females report $M = 33.81$ with a s.d. 3.22 while the males report $M = 31.78$ with a s.d. 2.04. The ANOVA test gave $F(1, 28) = 4.074$ at

$P = .053$. As $p > .05$, $H_0 1b$ is accepted. The findings report that there is no significant difference in understanding of textual elements by gender with females and males reporting equal understanding.

For understanding of the overall messages the females report $M = 33.12$ with a s.d. 3.87 while the males report $M = 25.92$ with a s.d. 2.70. The ANOVA test gave $F(1, 28) = 33.764$ at $P = .000$. As $p < .05$, $H_0 1c$ is rejected. The findings report that there was a significant difference in understanding of the overall messages by gender with females reporting significantly higher understanding than males.

Table 4.1: Means, standard deviation and results of ANOVA for understanding of pictorial elements, text elements, and overall messages by gender.

		N	Mean	Std. Deviation	ANOVA Results
picture	female	16	29.8125	4.47540	$F(1,28) = 9.677$
	male	14	25.2143	3.46806	$p = .004$
text	female	16	33.8125	3.22942	$F(1,28) = 4.074$
	male	14	31.7857	2.04483	$p = .053$
messages	female	16	33.1250	3.87943	$F(1,28) = 33.764$
	male	14	25.9286	2.70226	$p = .000$

$H_0 2$: There are no significant differences in understanding a) pictorial elements, b) text elements, and c) overall messages by race.

Table 4.2 reports means, standard deviation and results of ANOVA for understanding of pictorial elements, text elements, and overall messages by race. For understanding of pictorial elements the Malaysian report $M = 27.60$ with a s.d. 5.31 while the Chinese report $M = 28.00$ with a s.d. 4.57 and while the India report $M = 27.40$ with a s.d. 4.35. The ANOVA test gave $F(2, 27) = .041$ at $P = .960$. As $p > .05$, $H_0 2a$ is accepted. The findings report that there is no a significant difference in understanding of pictorial elements by race with Malaysian, Chinese and Indian reporting equal understanding.

For understanding of textual elements the Malaysian report $M = 32.50$ with a s.d. 3.40 while the Chinese report $M = 32.90$ with a s.d. 3.60 and while the India report $M = 33.20$ with a s.d. 1.39. The ANOVA test gave $F(2, 27) = .139$ at $P = .87$. As $p > .05$, $H_0 2b$ is accepted. The findings report that there is no a significant difference in understanding of textual elements by race with Malaysian, Chinese and Indian reporting equal understanding.

For understanding of the overall messages the Malaysian report $M = 29.70$ with a s.d. 3.74 while the Chinese report $M = 31.20$ with a s.d. 6.49 and while the India report $M = 28.40$ with a s.d. 28.40. The ANOVA test gave $F(2, 27) = .793$ at $P = .46$. As $p > .05$, $H_0 2c$ is accepted. The findings report that there is no a significant difference in understanding of the overall messages by race with Malaysian, Chinese and Indian reporting equal understanding.

Table 4.2: Means, standard deviation and results of ANOVA for understanding of pictorial elements, text elements, and overall messages by race.

		N	Mean	Std. Deviation	ANOVA Results
picture	malaysia	10	27.6000	5.31664	F(2,27) = .041
	chinese	10	28.0000	4.57044	p = .960
	india	10	27.4000	4.35125	
text	malaysia	10	32.5000	3.40751	F(2,27) = .139
	chinese	10	32.9000	3.60401	p = .871
	india	10	33.2000	1.39841	
messages	malaysia	10	29.7000	3.74314	F(2,27) = .793
	chinese	10	31.2000	6.49444	p = .463
	india	10	28.4000	28.40788	

H₀3: There are no significant differences in understanding a) pictorial elements, b) text elements, and c) overall messages by age.

Table 4.3 reports means, standard deviation and results of ANOVA for understanding of pictorial elements, text elements, and overall messages by age. For understanding of pictorial elements for age between 19-26 years old report M = 27.80 with a s.d. 6.09, age between 27-29 years old report M = 31.33 with a s.d. 1.86, age between 30-34 years old report M = 26.33 with a s.d.= 4.50, age between 35-39 years old report a M = 26.00 with a s.d. 5.52, while age 40 and above years old report M = 27.40 with a s.d. 2.19, The

ANOVA test gave $F(4,25) = 1.423$ at $P = .225$. As $p > .05$, H_{03a} is accepted. The findings report that there is no a significant difference in understanding of pictorial elements by age with age from 19-26, 27-29, 30-34, 35-39, 40 and above reporting equal understanding.

For understanding of textual elements for age between 19-26 years old report $M = 32.80$ with a s.d. 2.16, age between 27-29 years old report $M = 35.33$ with a s.d. 1.96, age between 30-34 years old report $M = 32.16$ with a s.d. 4.40, age between 35-39 years old report $M = 31.50$ with a s.d. 2.00, while age 40 and above years old report $M = 33.00$ with a s.d. 2.44, The ANOVA test gave $F(4,25) = 1.822$ at

$P = .156$. As $p > .05$, H_{03c} is accepted. The findings report that there is no a significant difference in understanding of textual elements by age with age from 19-26, 27-29, 30-34, 35-39, 40 and above reporting equal understanding.

For understanding of the overall messages for age between 19-26 years old report $M = 27.40$ with a s.d. 3.36, age between 27-29 years old report $M = 34.66$ with a s.d. 5.39, age between 30-34 years old report a mean of 31.16 with a s.d. 1.83, age between 35-39 years old report $M = 26.62$ with a s.d. 4.06, while age 40 and above years old report $M = 29.60$ with a s.d. 5.50, The ANOVA test gave $F(1,28) = 3.697$ at $P = .017$. As $p > .05$, H_{03c} is rejected. The findings report that there was a significant difference in understanding of overall elements by age with group between (27-29) reporting significantly higher understanding than other groups.

Table 4.3: Means, standard deviation and results of ANOVA for understanding of pictorial elements, text elements, and overall messages by age.

		N	Mean	Std. Deviation	ANOVA Results
picture	19-26	5	27.8000	6.09918	F (4,25) = 1.423 P = .225
	27-29	6	31.3333	1.86190	
	30-34	6	26.3333	4.50185	
	35-39	8	26.0000	5.52914	
	40 and above	5	27.4000	2.19089	
	Total	30	27.6667	4.60385	
text	19-26	5	32.8000	2.16795	F (4,25) = 1.822 P = .156
	27-29	6	35.3333	1.96638	
	30-34	6	32.1667	4.40076	
	35-39	8	31.5000	2.00000	
	40 and above	5	33.0000	2.44949	
	Total	30	32.8667	2.88556	
messages	19-26	5	27.4000	3.36155	F (1,28) = 3.697 P = .017
	27-29	6	34.6667	5.39135	
	30-34	6	31.1667	1.83485	
	35-39	8	26.6250	4.06861	
	40 and above	5	29.6000	5.50454	
	Total	30	29.7667	4.93882	

H₀ 4 There are no significant differences in a) Attention, b) Relevance, c) Confidence and d) Satisfaction by gender.

Table 4.4 reports means, standard deviation and results of ANOVA for motivation of Attention, Relevance, Confidence and Satisfaction by gender. For motivation of Attention the females report M = 32.50 with a s.d. 3.38 while the males report M = 30.71 with a s.d. 3.70. The ANOVA test gave F (1, 28) = 1.900 at P = .179. As $p > .05$, H₀4a is accepted. The findings report that there is not a significant difference in motivating of Attention by gender with females and males reporting equal motivating.

For motivation of Relevance the females report $M = 25.12$ with a s.d. 3.30 while the males report $M = 24.07$ with a s.d. 3.33. The ANOVA test gave $F(1, 28) = 0.752$ at $P = 0.393$. As $p > .05$, $H_0 4b$ is accepted. The findings report that there is not a significant difference in motivating of Relevance by gender with females and males reporting equal motivating.

For motivation of Confidence the females report $M = 24.81$ with a s.d. 2.07 while the males report $M = 22.71$ with a s.d. 2.94. The ANOVA test gave $F(1, 28) = 5.191$ at $P = 0.031$. As $p < .05$, $H_0 4c$ is rejected. The findings report that there is a significant difference in motivating of Confidence by gender with females reporting significantly higher motivating than males.

For motivation of Satisfaction the females report $M = 16.87$ with a s.d. 2.57 while the males report $M = 17.50$ with a s.d. 1.16. The ANOVA test gave $F(1, 28) = .691$ at $P = .411$. As $p > .05$, $H_0 4d$ is accepted. The findings report that there is no a significant difference in motivating of Satisfaction by gender with females and males reporting significantly equal motivating.

Table 4.4: Means, standard deviation and results of ANOVA for understanding of pictorial elements, text elements, and overall messages by gender.

		N	Mean	Std. Deviation	ANOVA RESULTS
Attention	female	16	32.5000	3.38625	F (1,28) = 1.900 P = .179
	male	14	30.7143	3.70921	
	Total	30	31.6667	3.59438	
Relevance	female	16	25.1250	3.30404	F (1,28) = .752

Confidence	male	14	24.0714	3.33891	P = .393
	Total	30	24.6333	3.30604	
	female	16	24.8125	2.07264	
Satisfaction	male	14	22.7143	2.94641	F (1,28) = 5.191 P = .031
	Total	30	23.8333	2.69205	
	female	16	16.8750	2.57876	
	male	14	17.5000	1.16024	F (1,28) = .691 P = .411
	Total	30	17.1667	2.03560	

H₀5 There are no significant differences in Attention, Relevance, Confidence and Satisfaction by race.

Table 4.5 reports means, standard deviation and results of ANOVA for motivation of Attention, Relevance, Confidence and Satisfaction by race. For motivation of Attention the Malaysian report M = 32.20 with a s.d. 3.29 while the Chinese report M = 31.70 with a s.d. 4.11 while the Indian report M = 31.10 with a s.d. 3.63. The ANOVA test gave F (2, 27) = 0.222 at P = .802. As $p > .05$, H₀5a is accepted. The findings report that there is not a significant difference in motivating of Attention by race with Malaysian, Chinese and Indian reporting equal motivating.

For motivation of Relevance the Malaysian report M = 24.40 with a s.d. 3.83 while the Chinese report M = 24.80 with a s.d. 2.97 while the Indian report M = 24.70 with a s.d. 3.40. The ANOVA test gave F (2, 27) = 0.037 at P = .964. As $p > .05$, H₀5b is accepted. The findings report that there is significant difference in motivating of Relevance by race with Malaysian, Chinese and Indian reporting equal motivating.

For motivation of Confidence the Malaysian report M = of 24.70 with a s.d. 2.54 while the Chinese report M = 23.90 with a s.d. 2.07 while the Indian report M = 22.90 with a s.d. 3.28. The ANOVA test gave F (2, 27) = 1.133 at P = .337. As $p > .05$, H₀5c is

accepted. The findings report that there is not a significant difference in motivating of Confidence by race with Malaysian, Chinese and Indian reporting equal motivating.

For motivation of Satisfaction the Malaysian report $M = 16.50$ with a s.d. 2.54 while the Chinese report $M = 17.50$ with a s.d. 1.50 while the Indian report $M = 17.50$ with a s.d. 1.95. The ANOVA test gave $F(2, 27) = 0.793$ at $P = .463$. As $p > .05$, H_0 is accepted. The findings report that there is not a significant difference in motivating of Satisfaction by race with Malaysian, Chinese and Indian reporting equal motivating.

Table 4.5: Means, standard deviation and results of ANOVA for motivating Attention, Relevance, Confidence, Satisfaction by race.

		N	Mean	Std. Deviation	ANOVA RESULTS
attention	malaysia	10	32.2000	3.29309	$F(2,27) = 0.222$ $P = .802$
	chinese	10	31.7000	4.11096	
	india	10	31.1000	3.63471	
	Total	30	31.6667	3.59438	
relevance	malaysia	10	24.4000	3.83551	$F(2,27) = 0.037$ $P = .964$
	chinese	10	24.8000	2.97396	
	india	10	24.7000	3.40098	
	Total	30	24.6333	3.30604	
confidence	malaysia	10	24.7000	2.54078	$F(2,27) = 1.133$ $P = .337$
	chinese	10	23.9000	2.07900	
	india	10	22.9000	3.28126	
	Total	30	23.8333	2.69205	
satisfaction	malaysia	10	16.5000	2.54951	$F(2,27) = 0.793$ $P = .463$
	chinese	10	17.5000	1.50923	
	india	10	17.5000	1.95789	
	Total	30	17.1667	2.03560	

H_0 6 There are no significant differences in Attention, Relevance, Confidence and Satisfaction by age.

Table 4.6 reports means, standard deviation and results of ANOVA for motivation of Attention, Relevance, Confidence and Satisfaction by age. For motivation of Attention for the age between age between 19-26 years old report $M = 30.80$ with a s.d. 3.89, age between 27-29 years old report $M = 33.33$ with a s.d. 2.33, age between 30-34 years old report $M = 33.33$ with a s.d. 3.38, age between 35-39 years old report $M = 30.37$ with a s.d. 3.73, while age 40 and above years old report $M = 30.60$ with a s.d. 4.33, The ANOVA test gave $F(4,25) = 1.101$ at $P = .378$. As $p > .05$, $H_0 6a$ is accepted. The findings report that there is no a significant difference in motivating Attention by age with age from 19-26, 27-29, 30-34, 35-39, 40 and above reporting equal motivating.

For motivation of Relevance for the age between age between 19-26 years old report $M = 26.80$ with a s.d. 2.68, age between 27-29 years old report $M = 27.00$ with a s.d. 1.54, age between 30-34 years old report $M = 24.66$ with a s.d. 4.80, age between 35-39 years old report $M = 21.87$ with a s.d. 2.23, while age 40 and above years old report $M = 24.00$ with a s.d. 1.22, The ANOVA test gave $F(4,25) = 3.806$ at $P = .015$. As $p < .05$, $H_0 6b$ is rejected. The findings report that there is a significant difference in motivating of Relevance by age with group between (27-29) reporting significantly higher motivating than other groups.

For motivation of Confidence for the age between age between 19-26 years old report $M = 23.60$ with a s.d. 1.51, age between 27-29 years old report $M = 24.83$ with a s.d. 1.32, age between 30-34 years old report $M = 25.50$ with a s.d. 2.81, age between 35-39 years old report $M = 22.00$ with a s.d. 3.46, while age 40 and above years old report $M = 23.80$ with a s.d. 2.16, The ANOVA test gave $F(4,25) = 1.943$ at $P = .135$. As $p > .05$, $H_0 6c$ is accepted. The findings report that there is no a significant difference in motivating

Confidence by age with age from 19-26, 27-29, 30-34, 35-39, 40 and above reporting equal motivating.

For motivation of Satisfaction for the age between age between 19-26 years old report M = 18.20 with a s.d. 1.78, age between 27-29 years old report M = 18.00 with a s.d. 1.54, age between 30-34 years old report M = 17.16 with a s.d. 2.78, age between 35-39 years old report M = 16.12 with a s.d. 1.72, while age 40 and above years old report M = 16.80 with a s.d. 2.04, The ANOVA test gave $F(4,25) = 1.163$ at $P = .351$. As $p > .05$, H_0 is accepted. The findings report that there is no a significant difference in motivating Confidence by age with age from 19-26, 27-29, 30-34, 35-39, 40 and above reporting equal motivating.

Table 4.6: Means, standard deviation and results of ANOVA for motivating Attention, Relevance, Confidence, Satisfaction by age.

		N	Mean	Std. Deviation	ANOVA RESULTS
Attention	19-26	5	30.8000	3.89872	$F(4,25) = 1.101$ $P = .378$
	27-29	6	33.3333	2.33809	
	30-34	6	33.3333	3.38625	
	35-39	8	30.3750	3.73927	
	40 and above	5	30.6000	4.33590	
	Total	30	31.6667	3.59438	
Relevance	19-26	5	26.8000	2.68328	$F(4,25) = 3.806$ $P = .015$
	27-29	6	27.0000	1.54919	
	30-34	6	24.6667	4.80278	
	35-39	8	21.8750	2.23207	
	40 and above	5	24.0000	1.22474	
	Total	30	24.6333	3.30604	
Confidence	19-26	5	23.6000	1.51658	$F(4,25) = 1.943$ $P = .135$
	27-29	6	24.8333	1.32916	
	30-34	6	25.5000	2.81069	
	35-39	8	22.0000	3.46410	
	40 and above	5	23.8000	2.16795	
	Total	30	23.8333	2.69205	

Satisfaction	19-26	5	18.2000	1.78885	F (4,25) = 1.163 P = .351
	27-29	6	18.0000	1.54919	
	30-34	6	17.1667	2.78687	
	35-39	8	16.1250	1.72689	
	40 and above	5	16.8000	2.04939	
	Total	30	17.1667	2.03560	

4.3 Summary of Results

	Hypothesis	Results
H ₀₁	<p><i>H_{01a}: There are no significant differences in understanding of pictorial elements by gender.</i></p> <p><i>H_{01b}: There are no significant differences in understanding of text element by gender.</i></p> <p><i>H_{01c}: There are no significant differences in understanding of overall messages by gender.</i></p>	<p>Rejected</p> <p>P = .004 (p < .05)</p> <p>Accepted</p> <p>P = .053 (p > .05)</p> <p>Rejected</p> <p>P = .000 (p < .05)</p>
H ₀₂	<p><i>H_{02a}: There are no significant differences in understanding of pictorial elements by race.</i></p> <p><i>H_{02b}: There are no significant differences in understanding of text elements by race.</i></p> <p><i>H_{02c}: There are no significant differences in understanding of overall messages by race.</i></p>	<p>Accepted</p> <p>P = .960 (p > .05)</p> <p>Accepted</p> <p>P = .87 (p > .05)</p> <p>Accepted</p> <p>P = .46 (p > .05)</p>
H ₀₃	<p><i>H_{03a}: There are no significant differences in understanding of pictorial element by age.</i></p>	<p>Accepted</p> <p>P = .225 (p > .05)</p>

	<p>H₀3b <i>There are no significant differences in understanding text elements by age.</i></p> <p>H₀3c <i>There are no significant differences in understanding text elements overall messages by age.</i></p>	<p>Accepted</p> <p>P = .156 (p>.05)</p> <p>Rejected</p> <p>P = .017 (p>.05)</p>
H ₀ 4	<p>H₀4a <i>There are no significant differences in motivating Attention by gender.</i></p> <p>H₀4b <i>There are no significant differences in motivating Relevance by gender.</i></p> <p>H₀4c <i>There are no significant differences in motivating Confidence by gender.</i></p> <p>H₀4d <i>There are no significant differences in motivating Satisfaction by gender.</i></p>	<p>Accepted</p> <p>P = .179 (p>.05)</p> <p>Accepted</p> <p>P = .393 (p>.05)</p> <p>Rejected</p> <p>P = .031 (p>.05)</p> <p>Accepted</p> <p>P = .411 (p>.05)</p>
H ₀ 5	<p>H₀5a <i>There are no significant differences in motivating Attention by race.</i></p> <p>H₀5b <i>There are no significant differences in motivating Relevance by race.</i></p> <p>H₀5c <i>There are no significant differences in motivating Confidence by race.</i></p> <p>H₀5d <i>There are no significant differences in motivating Satisfaction by race.</i></p>	<p>Accepted</p> <p>P = .802 (p>.05)</p> <p>Accepted</p> <p>P = .964 (p>.05)</p> <p>Rejected</p> <p>P = .337 (p>.05)</p> <p>Accepted</p> <p>P = .463 (p>.05)</p>
H ₀ 6	<p>H₀6a <i>There are no significant differences in motivating Attention by age.</i></p> <p>H₀6b <i>There are no significant differences in motivating Relevance by age.</i></p>	<p>Accepted</p> <p>P = .378 (p>.05)</p> <p>Rejected</p> <p>P = .015 (p>.05)</p>

CHAPTER 5

DISCUSSION

5.1 Introduction

This study aimed to investigate whether understanding of pictorial, text, overall message, and Attention, Relevance, Confidence, Satisfaction (A.R.C.S) which differs by gender, race, and age. The data collection of this study was questionnaire items and a test comprehension for COB postgraduate students of which a total of 30 questionnaires have been distributed. Reliability has been calculated based on the value of Cronbach Alpha.

5.2 Discussion

This study illustrated the finding based on the research questions which consisted on the following:

Understanding Pictorial, Textual, and Overall Message by Gender

The result indicated that the mean scores of females towards understanding billboards were significantly higher. However, according to the findings, there were no significant differences in understanding pictorial elements, text elements, and overall messages by gender. This poses an interesting fact because the difference in the ANOVA scores towards understanding of pictorial, textual, and overall message differ by gender. For instance, there are studies, such as the one conducted by Kathryn (2008) who justifies the occurrence of stereotypical representations of gender and other characteristics in individuals that appear in advertisements which support the finding of this study. Morten

(2005) documented that men are more confident in reading than females based on the visual elements which differ by their age. This study found that men do not mind reading, when they have an interesting book, and nobody makes it a sensation, landmark or result of some simple project which disagrees and not supported with our finding.

Understanding Pictorial, Textual, and Overall Message by Race

The result indicated that the mean scores were significantly different in understanding pictorial, textual, and overall message by race. The result illustrated that there were no significant differences in understanding pictorial elements, textual elements and overall messages by race. According to the findings, there are no significant differences in understanding pictorial elements, text elements, and overall messages by race. This shows that the understanding of pictorial elements by race was accepted with $p = .960$ ($p > .05$), the understanding of text element by race was also accepted with $p = .87$ ($p > .05$), and the understanding of overall messages by gender was accepted with $p = .46$ ($p > .05$). H2 findings present an interesting fact because of the difference in the ANOVA scores towards understanding of pictorial, textual, and overall message which all differ by race. For instance, there are studies, such as the one conducted by Kathryn (2008) who justifies the occurrence of stereotypical representations of race and other characteristics in individuals have been justified the cultural details that include culturally relevant phrases, characters, attire, expressions and values which appear in advertisements which support the finding of this study.

Understanding Pictorial, Textual, and Overall Message by Age

The obtained result found that there were significant differences in the mean scores in understanding of pictorial, textual, and overall message by age. But the result illustrated

that there were no significant differences in understanding of pictorial elements, textual elements and overall messages by age. According to the finding, there were no significant differences in understanding pictorial elements, text elements, and overall messages by age. This finding illustrates that the understanding of pictorial and textual elements by age was highly accepted, and understanding of overall messages by age was rejected. H3 findings present an interesting fact because of the difference in the ANOVA scores towards understanding of pictorial, textual, and overall message differ by age, the obtained result represented a dimensional shift encompasses the evolving nature of understanding by age, which today involves not only text but also image and screen literacy. The ability to comprehend billboard texts and to feel comfortable with certain age group is decidedly nontrivial. For instance, there are studies, such as the one conducted by Denise (2006) perceives the racial equality in American advertising differed by age and race, the study found that the understanding of posters elements for Americans differ by age and race by helping advertisers realize how important these two ethnics groups based on identification theory, which facilitates the understanding of ethnic portrayal in advertising. Identification theory maintains that people automatically assess their level of similarity with a source during an interaction and make similar judgments, which supports the finding of this study.

Attention, Relevance, Confidence, and Satisfaction in Reading Billboards Differ by Gender

The result indicated that the mean scores were significantly different, the result illustrated that there was a significant difference in confidence by gender with females reporting significantly higher mean than males, but there were no significant differences in Attention, Relevance and Satisfaction by gender. This shows that the differences in

motivating Attention by gender was accepted with $p = .179$ ($p > .05$), differences in motivating Relevance by gender was also accepted with $p = .393$ ($p > .05$), differences in motivating Confidence by gender was rejected with $p = .031$ ($p > .05$), and differences in motivating Satisfaction by gender was accepted with $p = .144$ ($p > .05$). The findings present an interesting fact because of the difference in the ANOVA scores towards attention, relevance, Confidence, and satisfaction in reading billboards differ by gender. According to Kellars Theory it has believed that different elements can effect readers during the understanding of the picture elements based on their gender such as (Attention, confidence in reading and understating, and satisfaction).

Attention, Relevance, Confidence, and Satisfaction in Reading Billboards Differ by Race

The result indicated that the mean scores were significant differences, the result illustrated that there was a significant difference in confidence by race. This shows that the differences in motivating Attention by race was accepted with $P = .805$ ($p > .05$), differences in motivating Relevance by race was also accepted with $P = .964$ ($p > .05$), differences in motivating Confidence by race was rejected with $P = .337$ ($p > .05$), and differences in motivating Satisfaction by race was accepted with $P = .436$ ($p > .05$). The findings present an interesting fact because of the difference in the ANOVA scores towards attention, relevance, Confidence, and satisfaction in reading billboards differ by race.

Attention, Relevance, Confidence, and Satisfaction in Reading Billboards Differ by Age

The result indicated that the mean scores were significant differences, the result illustrated that there was a significant difference in confidence by race. This shows that the difference in motivating Attention by age was accepted with $P = .378$ ($p > .05$), differences in motivating Relevance by age was rejected with $P = .015$ ($p > .05$), differences in motivating Confidence by age was accepted with $P = .135$ ($p > .05$), and differences in motivating Satisfaction by age was accepted with $P = .351$ ($p > .05$). The findings present an interesting fact because of the difference in the ANOVA scores towards attention, relevance, Confidence, and satisfaction in reading billboards differ by race.

5.3 Suggestions for Future Research

The research confirmed the relationship between billboards elements and respondent age, race, and gender in term of understanding and motivation. It provides estimates of the research model and suggests which components of the adoption item get more successful in another area. The research models are being pursued in the adoption of Keller and Gestalt Theories.

This study applied Gestalt principles in terms of pictorial, textual, and message which it's free from subjective aesthetic bias, that artists have been able to use to present visual information. Three elements have been distilled from the Gestalt literature and these elements were applied to the visual redesign of the billboards, to improve its appearance and its effectiveness on gender, and age. The user evaluations indicate that all the identified Gestalt laws are beneficial for visual design of billboard elements. However, they are not recognized to be uniformly beneficial for male as in female.

In our view, these elements of billboards are so important for the information age, that their relative presence or absence will have a significant effect on an individual's motivation and attention for reading the billboards. In this respect we see the development of these skills as so important.

5.4 Conclusion

It was define a way to deliver the information contained in the reports in a way that would be meaningful and could translate into reader of billboards. Through the survey research method, data were grouped into reports appropriate to the COB post graduate students. Standards were defined to report data in a valid, student age, student race, and student gender as it related to defined target goals.

The questionnaire sees a complete picture of the way different things are connected, what to focus on and measure, together with direction and clarity. Keller questionnaire has been adopted in this study which helped to look up the capacity to make things appear to be connected, making a kind of wholeness or optimum solution. The results of ANOVA test were positively related to reading and understanding the billboard elements based on age, gender, and race as hypothesized. The positive association between combinations among all independent variables to dependent variable was supported. Based on the results, researcher found that all hypotheses are accepted and significant.

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APPENDIX A

QUESTIONNAIRE

SECTION A: BACKGROUND OF THE RESPONDENTS

1. Gender:

☐ 1. Female

☐ 2. Male

2. Race:

☐ 1. Malaysian

☐ 2. Chinese

☐ 3. Indian

3. Age:

☐ 19-26

☐ 27-29

☐ 30-34

☐ 35-39

☐ 40 and above

SECTION B: Billboard Understanding (Billboard)

This part is planned to get your opinion on the billboard aspects: Please state your opinion by putting yes or no.

THE VISUALS

- Do you understand the Billboard pictures?

☐ 1. Yes

☐ 2. No

TEXTS

- Do you understand the Billboard texts?

☐ 1. Yes

☐ 2. No

MESSAGES

- Do you understand the Billboard messages?

☐ 1. Yes

☐ 2. No

SECTION B: Motivation Survey (Modified from Keller)

We are in the process of finding ways of improving the design materials. Your answers to these questions will greatly assist us to plan and design effective and interesting instruction. We want your impression of the reading materials you have just read / studied.

Please read carefully the instructions given in the next page.

Instructions:

1. There are 36 statements in this questionnaire. Please refer to the reading materials you have just read / studied to answer this questionnaire.
2. Please think about each statement in relation to the reading materials you have just read / studied, and indicate how true it is. Give the answer **that truly applies to you and** not what you would like to be true, or what you think others want to hear.
3. Think about each statement by itself and indicate how true it is. Do not be influenced by your answers to other statements.
4. Mark your responses by circling the corresponding number and letter on the answer sheet provided.
5. The answers you give will be confidential and will not affect you in any way.
6. Use the response scale printed below:

A = Strongly agree

B = Agree

C = Not sure

D = Disagree

E = Strongly disagree

A = Strongly agree, **B** = Agree, **C** = Not sure, **D** = Disagree, **E** = Strongly disagree

1. When I first looked at this Billboard, I had the impression that it would be easy for me.
2. There was something interesting at the beginning of this Billboard that got my attention
3. This Billboard was more difficult to understand than I would like for it to be.
4. After reading the introductory information, I felt confident that I knew what I was supposed to understand from this Billboard
5. Completing reading this Billboard gave me a satisfying feeling of accomplishment.
6. It is clear to me how the content of this Billboard is related to things I already know.
7. Many of the pages had so much information that it was hard to pick out and remember the important point.
8. This Billboard is eye-catching.
9. There were pictures of examples that showed me how this material could be important to some people.
10. Understanding this Billboard successfully was important to me.
11. The quality of the texts helped to hold my attention.
12. This Billboard is so abstract that it was hard to keep my attention on it.
13. As I watch this Billboard, I was confident that I could understand the content.
14. I understood this Billboard not much that I would like to know more about the contents.

15. The contents of this Billboard look dry and unappealing.
16. The content of this Billboard is relevant to my interests
17. The way of information is arranged on the Billboard helped keep my attention.
18. There are explanations or examples of how people use the knowledge in this Billboard.

A = Strongly disagree B = Disagree C = Not sure D = Agree E = Strongly agree

19. The information in this Billboard was too difficult.
20. This Billboard has things that stimulated my curiosity.
21. I really enjoyed understanding this Billboard.
22. The amount of repetition in this Billboard caused me to get bored sometimes.
23. I understood some things that were surprising or unexpected.
23. The content and style of writing in this Billboard convey the impression that its content is worth knowing.
24. I understood some things that were surprising or unexpected.
25. After watching this Billboard for awhile, I was confident that I would be able to understand the contents inside.
26. This Billboard was not relevant to my needs because I already know most of it.

27. The wording of feedback while watching the Billboard helped me feel rewarded for my effort.
28. The variety of reading passages, exercises, illustrations, etc., helped keep my attention on the Billboard.
29. The style of writing is boring.
30. I could relate the content of this Billboard to things I have seen, done, or thought about in my own life.
31. There are too many words on each Billboard that makes it irritating.
32. It felt good to successfully complete this Billboard.
33. The content of this Billboard will be useful to me.
34. I could not really understand quite a bit of the material in this Billboard.
35. The good organization of the content helped me be confident that I would learn this Billboard.
36. It was a pleasure to work on such a well-designed Billboard.

Please circle appropriate letter

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	A	B	C	D	E
2	A	B	C	D	E
3	A	B	C	D	E
4	A	B	C	D	E
5	A	B	C	D	E
6	A	B	C	D	E
7	A	B	C	D	E
8	A	B	C	D	E
9	A	B	C	D	E
10	A	B	C	D	E
11	A	B	C	D	E
12	A	B	C	D	E
13	A	B	C	D	E
14	A	B	C	D	E
15	A	B	C	D	E
16	A	B	C	D	E
17	A	B	C	D	E
18	A	B	C	D	E
19	A	B	C	D	E
20	A	B	C	D	E
21	A	B	C	D	E
22	A	B	C	D	E
23	A	B	C	D	E
24	A	B	C	D	E
25	A	B	C	D	E
26	A	B	C	D	E

27	A	B	C	D	E
28	A	B	C	D	E
29	A	B	C	D	E
30	A	B	C	D	E
31	A	B	C	D	E
32	A	B	C	D	E
33	A	B	C	D	E
34	A	B	C	D	E
35	A	B	C	D	E
36	A	B	C	D	E

Keller's Dimensions & Items

Attention (12 items): 2, 8, 11, 12, 14, 15, 17, 20, 22, 23, 27, 28.

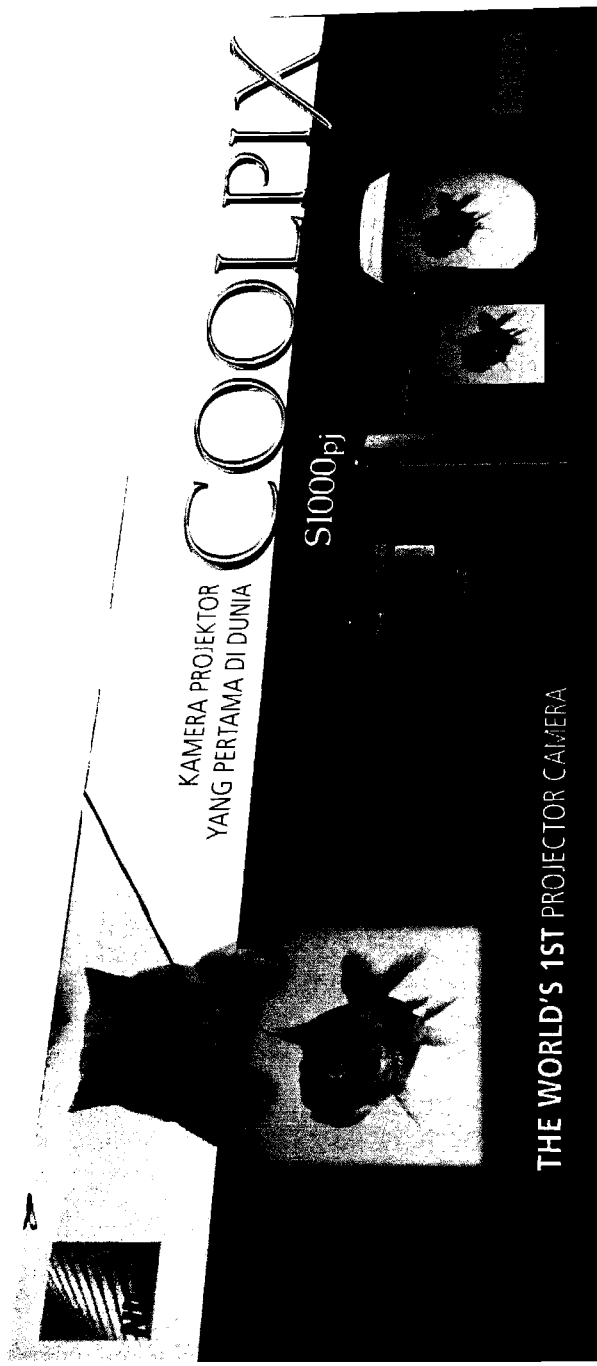
Relevance (9 items): 6, 7, 9, 16, 18, 24, 26, 29, 32.

Confidence (9 items): 1, 3, 4, 13, 19, 25, 30, 33, 34.

Satisfaction (6 items): 5, 10, 21, 31, 35, 36.

Billboard Samples





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